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MODELS FOR THE ADAPTIVE HARVEST MANAGEMENT OF ROCKY MOUNTAIN SANDHILL CRANES: PROBLEMS AND POTENTIAL

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Abstract: The migratory Rocky Mountain Population (RMP) of the greater sandhill crane (*Grus canadensis tabida*) breeds primarily in river valleys, marshes, and meadows of western Montana and Wyoming, southeastern Idaho, northern Utah, and northwestern Colorado. The RMP winters primarily in the Middle Rio Grande Valley of New Mexico, with smaller concentrations in the southwestern parts of that state, southeastern Arizona, and the northern highlands of Mexico. The San Luis Valley of Colorado is used as a stopover in both the spring and fall migrations. The RMP has been hunted on a permit basis since 1981, and currently these cranes are harvested in Arizona, Idaho, Montana, New Mexico, Utah, and Wyoming, and in Mexico. There are several sources of historic information on the dynamics of this population. Age ratios have been estimated from field observations in the San Luis Valley during fall migration since 1972. Cranes were banded, mostly on summer areas, from 1969-89, and re-sighted throughout the annual cycle. Aerial surveys and coordinated ground counts have been conducted either during spring migration in the San Luis Valley or in fall prior to migration since 1984 and 1987, respectively. A harvest survey has been conducted since 1981. Current monitoring programs include the fall assessment of age ratios, the fall pre-migration coordinated count, and the harvest survey. We discuss current attempts to use these information sources to build recruitment, survival, and harvest models for use in adaptive harvest management.

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Key words: adaptive management, *Grus canadensis*, harvest, sandhill crane.
